

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A multilayered gas sensing element comprising:
laminated layers comprising at least one solid electrolytic sheet containing zirconia and yttria and at least one insulating sheet containing alumina,
a bonding boundary intervening between said solid electrolytic sheet and said insulating sheet, and
said bonding boundary including at least partly a crystal phase containing silicon dioxide.
2. (Previously presented) A multilayered gas sensing element as in claim 1, where said crystal phase further contains at least one component selected from the group consisting of: calcium oxide, magnesium oxide, barium oxide, and strontium oxide.
3. (Previously presented) A multilayered gas sensing element as in claim 1, where said bonding boundary between said solid electrolytic sheet and said insulating sheet is undulated.
4. (Previously presented) A multilayered gas sensing element as in claim 1, where a crystal lattice of said solid electrolytic sheet is connected to a crystal lattice of said insulating sheet in said bonding boundary.
5. (Previously presented) A multilayered gas sensing element as in claim 1, wherein a thermal expansion coefficient difference between said solid electrolytic sheet and said insulating sheet is equal to or less than 2×10^{-6} .

SUGIYAMA
Appl. No. 09/873,287
October 26, 2004

6. (Previously presented) A multilayered gas sensing element as in claim 1, wherein a sintering contraction coefficient difference between said solid electrolytic sheet and said insulating sheet is equal to or less than 3%.

Claims 7-13. (Canceled).